

What is claimed is:

1. A partial reprojection method for reflecting a shape modified in a part model on a two-dimensional projection that is generated from an assembly model in a three-dimensional CAD system, the method comprising the steps of:

grouping elements projected from the assembly model for each part;

10 adding attributions of each part information to the two-dimensional projection, the attributions including a line of sight and a position of the part; and

specifying two-dimensional elements to be updated when updating the shape in the part model, so as to decide 15 a projecting direction of the part model from the line of sight of each part included in the part information and to decide a generating position of the two-dimensional elements from the position of the part included in the part information.

20 2. A partial reprojection method according to claim 1, further comprising the steps of:

adding attributions of projection information to the two-dimensional projection, the attributions including information about a loaded model and information about a 25 model to be projected; and

deciding whether the entire reprojection is performed from the assembly model or a partial reprojection is performed for a part in accordance with the projection information, wherein

30 if the partial reprojection is performed, the

attributions of the part information and the projection information are not changed but only the shape is changed.

3. A partial reprojection device for reflecting a shape modified in a part model on a two-dimensional
5 projection that is generated from an assembly model in a three-dimensional CAD system, the device comprising a reprojection processing portion for controlling a partial reprojection process and a modeling kernel for performing processes including a contour line process and a hidden
10 line process, wherein the reprojection processing portion includes

an associative analysis processing portion for analyzing information of the two-dimensional projection to be reprojected;

15 a drawing processing portion for deciding three-dimensional elements to be projected in association with the modeling kernel from three-dimensional shape data and a projection condition;

20 a drawing data generation processing portion for generating the decided three-dimensional elements as two-dimensional elements on the drawing; and

25 an associative setting processing portion for grouping the generated two-dimensional elements for each part and for setting a relationship with conditions and the models.

4. A computer program product for use in a three-dimensional CAD system for enabling reflection of a shape modified in a part model on a two-dimensional projection generated from an assembly model, the computer program product comprising:

means for grouping elements projected from the assembly model for each part;

means for adding attributions of each part information to the two-dimensional projection, the 5 attributions including a line of sight and a position of the part; and

means for specifying two-dimensional elements to be updated when updating the shape in the part model, so as to decide a projecting direction of the part model from 10 the line of sight of each part included in the part information and to decide a generating position of the two-dimensional elements from the position of the part included in the part information.

5. The computer program product according to claim 15 4, further comprising:

means for adding attributions of projection information to the two-dimensional projection, the attributions including information about a loaded model and information about a model to be projected;

means for deciding whether the entire reprojection 20 is performed from the assembly model or a partial reprojection is performed for a part in accordance with the projection information; and

means for changing only the shape without changing 25 the attributions of the part information and the projection information when performing the partial reprojection.

6. A recording medium that can be read by a computer and stores a computer program for a three- 30 dimensional CAD system that enables reflection of a shape

modified in a part model on a two-dimensional projection generated from an assembly model, the computer program making a computer perform the process comprising the steps of:

- 5 grouping elements projected from the assembly model for each part;
 - adding attributions of each part information to the two-dimensional projection, the attributions including a line of sight and a position of the part; and
- 10 specifying two-dimensional elements to be updated when updating the shape in the part model, so as to decide a projecting direction of the part model from the line of sight of each part included in the part information and to decide a generating position of the two-dimensional
- 15 elements from the position of the part included in the part information.

7. The recording medium according to claim 6, wherein the process performed by the computer further comprising the steps of:

- 20 adding attributions of projection information to the two-dimensional projection, the attributions including information about a loaded model and information about a model to be projected;
- 25 deciding whether the entire reprojection is performed from the assembly model or a partial reprojection is performed for a part in accordance with the projection information; and
- 30 changing only the shape without changing the attributions of the part information and the projection information when performing the partial reprojection.